GENERAL NOTES.

GEOGRAPHY AND TRAVELS.[1]

AMERICA.—Mr. R. H. Major cites the record of Ivar Bardsen, a Greenlander, who wrote about 1349, to prove that the Oester Bygden, or East Bygd, was really situated upon the west coast of Greenland, instead of upon the east, as believed by Nordenskjöld. Bardsen commences his description at a highland called *Hvarf*, a word which means a turning-point, and is the same which in Scotland has been converted into Cape Wrath. He says: "*Under Hvarf lies Herjulfnaes, and the inhabited part of Greenland lying most to the east.*" Then proceeding eastward, he mentions only uninhabited fjords, and ends at an island named Karsoe, "beyond which nothing can be seen on sea or land but ice and snow."

Then returning to Hvarf he leads us westwards, and mentions, seriatim, localities whose names are also found in the Sagas and the other chorographies. Then occur these words, "*Northwards* from Ericksfjord are two arms of the sea, named Ydrevig and Indrevig. Next, *northwards* lies *Bredefjord; thence further to the north* is Eyrarfjord, and so on to Iselfjord, which is the most *westerly* fjord in the East Bygd." He then says that a space of twelve nautical miles of uninhabited coast separated the West from the East Bygd.

Mr. Major points out that this description can only be explained by referring Hvarf to Cape Farewell, or some headland near it, as, were it a point on the west coast, the succeeding places toward the west would be southward of each other instead of northward. He states also that the Nancy map, discovered by Nordenskiöld, has only the words "Gronlandia Provincia" within a fancy festooned line, while the Zeno map, which is a century earlier than the first voyage of Columbus, shows the entire coast, east and west.

Mr. R. B. White, who has surveyed the upper course of the Atrato, and resided a long time in Colombia, has given most important information respecting the little known central provinces of that country. The Andes in Colombia divide into three parallel ranges, of which the most western is the primitive chain, and consists of granites and diorites infinitely older than the volcanic rocks of the central chain, which are of Post-cretaceous or even Tertiary age. The continuity of the valley which separates these two chains is broken at a point nearer to its southern than its northern extremity by a great focus of volcanic action, represented by the volcanoes of Puracé, Sotará, etc. The upheaval at this point separates the valley of the Cauca, which flows northwards into the Magdalena, from that of the Patia, which flows south for 120 miles, and then turning abruptly westward along a

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line of fault, finds its way to the Pacific through the wall of the western cordillera, the only great valley that breaks that continuous rampart from Patagonia to Darien. To the north of this a second area of upraised tablelands occurs, with the volcanoes of Herveo, Tolima and Santa Isabel on its southern limit, and there is no doubt that this upheaval once converted the valley of the Upper Cauca into a lake, but at length the river worked its way northward along a line of fracture parallel to the opposing western cordillera, and it now flows through one of the grandest ravines imaginable.

The State of Antioquia occupies this tableland, and is a rugged district with a healthy climate and a hardy, industrious population of 400,000, three-fourths of whom are whites, principally descended from emigrants from the north of Spain. The plateau is broken up by some deep valleys, among which are that of the Arma, 5000 feet deep, and of the Porce, which is even deeper.

The wonderful effects of the volcanic action to which this region has been subjected are evident from the facts that Cretaceous rocks exist 8000 feet above the sea, while in the central cordillera Post-tertiary gravels, such as occur at the sea-level, are found at a height of 6000 feet. Northward of Antioquia, and extending into its north-western extremity, are the extensive plains that occupy the lower course of the Cauca. These have a scanty population, for the lazy Negro of the coast has no tendency to spread inland, and the climate is too hot for the mountaineers of Antioquia. This plain is forest-covered, valuable dye-woods, timber, resins, balsams and gums are found, and the tallow-nut, ivory-nut, caoutchouc, ginger and ipecacuanha occur.

This region was called by the Indians Zenufana, or "Land of Gold." Its gold mines were worked by Indians, probably of a low grade of civilization, but tributaries of the higher races. A great Indian road, connecting Bogotá, the capital of the Zipa, with the Zenú and Darien kingdoms, traversed the country. The rivers of the more elevated regions are also rich in gold, and 15,000 of the natives of Antioquia are engaged in mining it.

The Patia valley has a climate of its own, intermediate between the hot damp climate of the coast and the warm dry valleys of the interior. Cacao flourishes near El Castigo, sometimes attaining a height of 120 feet; fine coffee is produced on the higher land, vanilla grows wild in such abundance that its long creeping roots obstruct passage through the woods, and caoutchouc, rare balsams and Brazil wood are found.

Before entering the Strait of Miramá, flanked by heights which tower to 10,000 or 12,000 feet, the Patia comes to rest in an immense pool surrounded by cliffs of slate rock, through which it finds an exit by a cleft not more than twelve feet wide. Through this it moves with a scarcely perceptible current and, therefore, since the river above the pool is in volume many times larger

than the Thames just above London the fissure must be very deep.

To the north-west of the western cordillera lie two rivers which repeat, on a smaller scale, the features observed in the Cauca and Patia. These are the Atrato and the San Juan, the former flowing northward into the Atlantic, the latter southward into the Pacific. Though much has been written about the Lower Atrato, the upper portion of the valley is less known. According to Mr. White, the river is navigable not only to Quibdó, where it is 250 yards wide, but to Lloró, which is in the midst of the upper basin, a region well adapted for agriculture, hilly but not mountainous, and covered with virgin forest. The higher portions of this valley (4000 to 5000 feet) are very healthy, and are diversified by open prairie. Here every kind of tropical produce may be cultivated, as the temperature ranges from 60° to 80°, caoutchouc and the ivory nut are abundant, and copper, coal and gold are met with.

The opening of a ship canal across the isthmus will render the lands of this elevated yet fertile region accessible, and the colonists are at hand in the neighboring State of Antioquia.

Indian cemeteries and sites of towns and villages are met with in great numbers among the forests, but from the known rapidity of growth of the trees in this region, as evidenced by the vegetation that stands on what are undoubted old Spanish mine-workings, it is probable that the trees are not more than 200 or 300 years old, and that at the time of the Spanish conquest much open land existed here, occupied by an agricultural Indian population, now practically extinct.

Mr. White has ascended the Cerro Torrá, a peculiar mountain about twenty-seven miles east of Novita, on the San Juan. This mountain, which abruptly terminates a ridge of hills, and rises about 12,600 feet above the sea, had not before been ascended. Its western face is a horse-shoe shaped amphitheatre which slopes regularly for half a mile or so, and then ends in a horse-shoe shaped precipice, down which hundreds of streams fall a sheer 3000 feet, to collect at its foot into the River Surama. The mountain consists of clay and mica slates, probably Jurassic, while the igneous rock, the eruption of which upheaved it, is syenitic granite.

A very large proportion of the platinum produced in the world is obtained from the Upper San Juan.